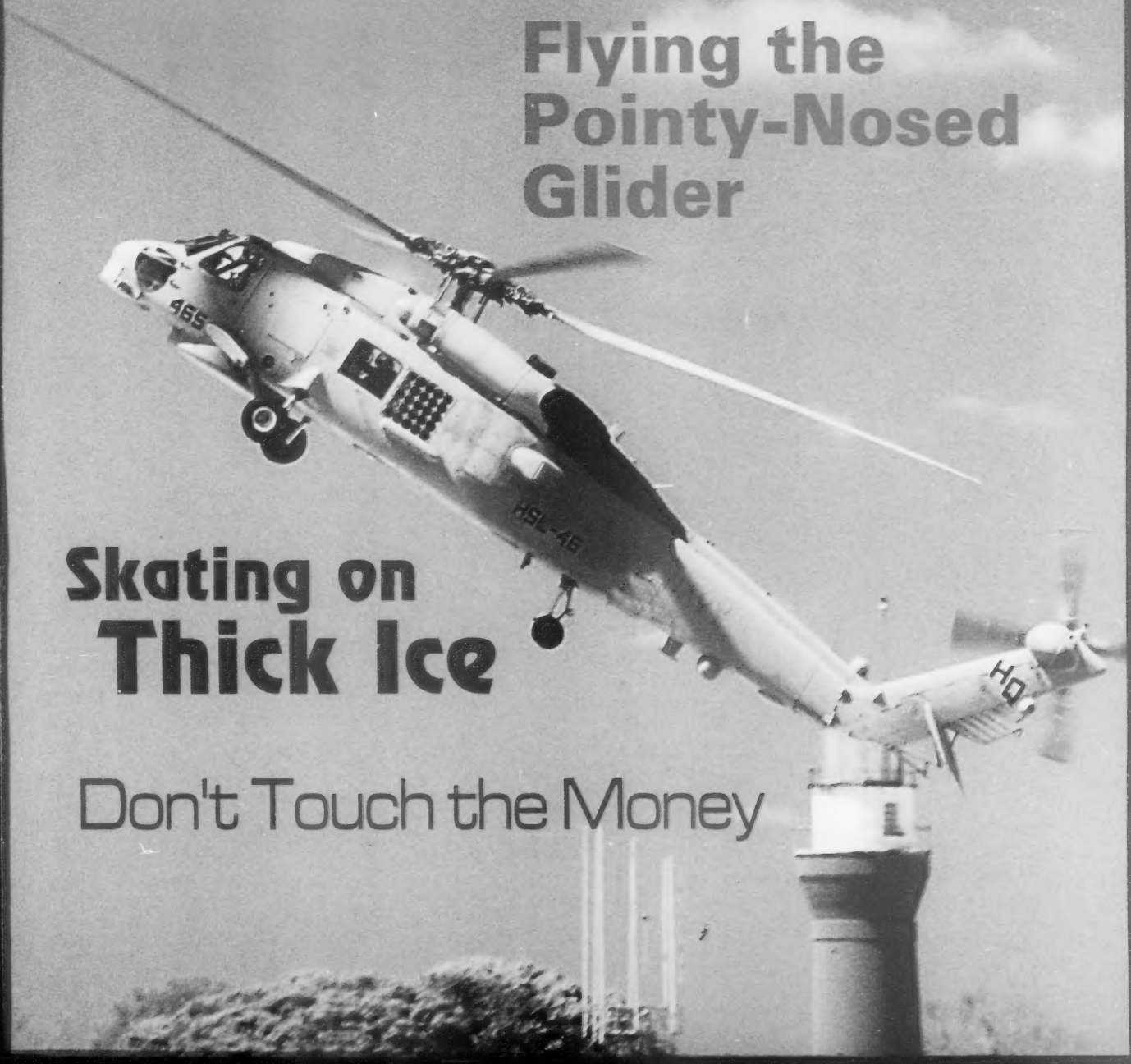
THE NAVAL SAFETY CENTER'S AVIATION MAGAZINE

approach

June 2001

Flying the Pointy-Nosed Glider



Skating on Thick Ice

Don't Touch the Money

approach

The Naval Safety Center's Aviation Magazine
June 2001 Volume 46, No. 06

On the Cover: HSL-46 practicing auto-rotations in and around Naval Station Mayport, Fla. Photo by Matthew J. Thomas

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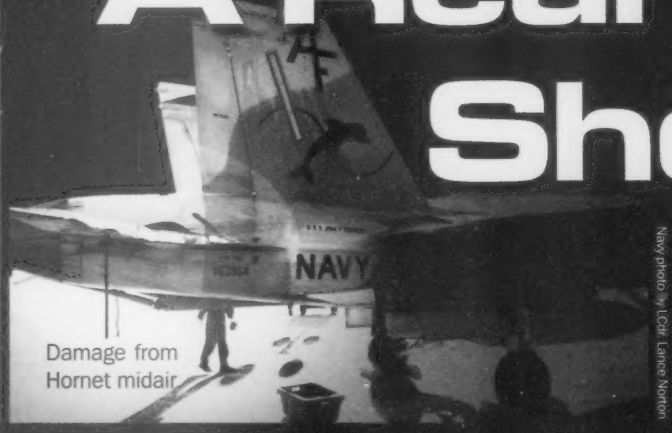
A Real Show-Stop



Damage from Hornet midair

Navy photo by LCdr. Lance Norton

by LCdr. Lance Norton

What a great deal! I was scheduled to fly what most strike-fighter pilots consider our best mission – an air-to-air 2 v 2 – and I was the flight lead. After arriving at the squadron and checking the weather (clear and a million), I checked with ops to ensure we had all the players for the event.

After making a few minor changes to the line-up, we decided to go with a three-plane event and make it a 2 v 1. We still could get some great intercept training and ACM. I briefed the event and covered all the Admin, TAC Admin, training rules, and conduct of the flight. All three members would get the chance to lead a section, be a wingman, and play the adversary. That way, we'd maximize the training and make ops happy to boot.

At the end of the brief, I covered the all-important ORM portion of the brief: "Today our main objective is to not run into each other. Let's be heads up for each other out there."

We launched, joined up and climbed out over the always heavily congested airspace of our metro area. We were in the MOA in what seemed like no time. I split up the flight, and we completed our G-warm-up and fence checks. As the first Blue air lead of the section, I would play bogey for the next run, and be Blue air wingman for the last run. The first two runs went as briefed, with all of us getting some good radar work, intercept maneuvering, and some of that coveted engaged-burner time. It seemed more like fun than work.

As I passed the lead and became the wingman, we called sight of each other and began climbing and heading east for separation for the next intercept. After leveling off in combat spread, with me slightly sucked, I noticed we were getting close to the eastern edge of the area. After a few more potatoes, I decided to give my lead a sugar call for him to check his position. I said, "Recommend a turn back to the west for area." Lead immediately started an aggressive, 180-degree right turn. I assumed (not a good word in naval aviation) that he was executing an uncalled, in-place right turn. Since the turn was away from me, I followed him through about 120 degrees until I lost sight of him as he passed underneath my nose.

A second later, he called on the radio, "Sharks, reference 300 degrees." I pulled to the new 300-degree heading, rolled out, and looked left for my lead. I expected to see him to my left, level or slightly higher, but he was nowhere in sight.

"Hmmm," I thought. "That's odd. He should be there. OK, look right." Again, nowhere in sight. This is where the hair on the back of the neck starts to stand up. Could he be underneath me? Not wanting to find out the

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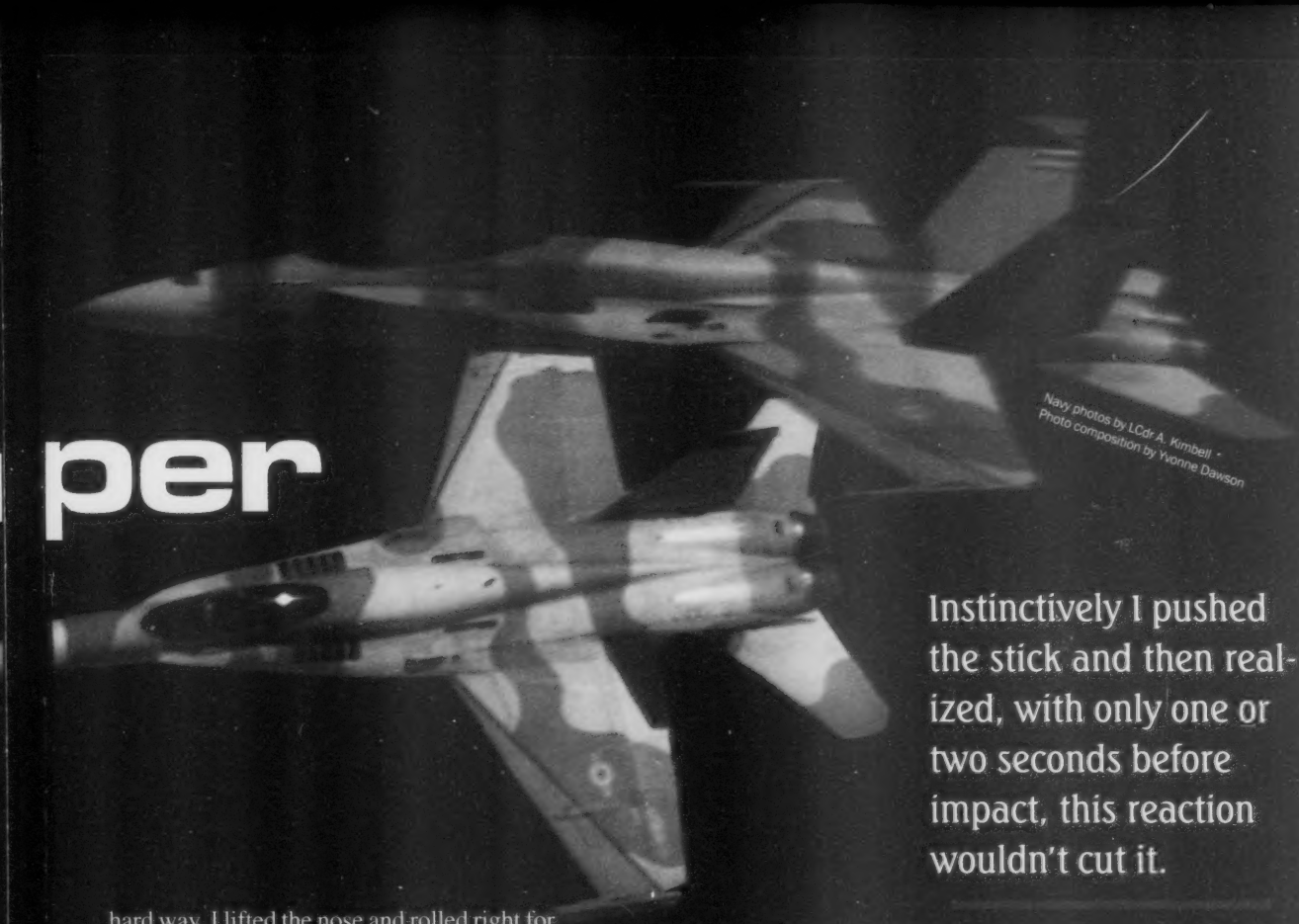

Navy photos by LCdr A. Kimbell
Photo composition by Yvonne Dawson

Instinctively I pushed the stick and then realized, with only one or two seconds before impact, this reaction wouldn't cut it.

hard way. I lifted the nose and rolled right for the belly check. He wasn't there, either. Thinking I missed him in the sun or haze, I began to key the mike and call "Blind"—in hindsight, something I should have done as soon as I didn't see lead out of the turn.

I caught the silhouette of my lead high, to my right, and within about 100 feet. I was closing rapidly on collision bearing! Instinctively, I pushed the stick and then realized, with only one or two seconds before impact, this reaction wouldn't cut it. I snap rolled left and pulled to avoid the impending collision. My life didn't flash in front of my eyes, which I think is a good thing. I felt a sickening "thump" and an immediate, uncontrolled roll back to the right, ending up wings level. The unthinkable has just happened: I'd had a midair at close to 350 knots.

My aircraft still was flying and controllable. I immediately thought about my wingman. Lead came up on the radio and called, "Knock it off." That was the most reassuring sound I ever had heard. He was OK and flying normally.

We regained sight and diverted to our briefed divert field, an air force base 45 miles away. My right trailing-edge flap (which came completely off) and right horizontal stab (which was all but torn off) had hit the bottom of my lead's aircraft. The collision had damaged lead's pitot-static system, nose landing-gear doors and left leading-edge extension.

How could this have happened? We had come within milliseconds of a disastrous, Class A mishap during a simple, daytime section maneuver we have all done hundreds, if not thousands, of times.

Well, "simple" maneuvers have killed dozens of aviators, destroyed hundreds of aircraft, and cost millions of man-hours in repairs. We had gotten too comfortable. I assumed my lead was performing an in-place section turn and maneuvered my aircraft accordingly. In actuality, he performed a section turn-in and assumed I was in tac-wing position. I hesitated to call blind and should have right away. If my lead also had looked for me, we very well could have averted this near-tragedy.

LCdr. Norton flies with VFA-203.

Navy photo by Matthew Thomas
photo composite by Yvonne Dawson

Stupid Is As Stupid Does

by Lt. Tim Kinsella

For those of us lucky enough to have deployed to the Persian Gulf, we all know how monotonous life becomes. Especially when your ship is "swinging from the hook," waiting for the Marines to finish whatever exercise they happen to be doing on the beach that particular week. As SAR pilots on a gator, we always were looking for something to break the pattern or liven things up: climbing to angels 10 to get some cool air, doing the odd medevac, throwing in an EOD Ex every now and again, or maybe even a VBSS if we felt like it. Whatever it was, we didn't mind, just as long as it got us off the ship for a few hours every day.

While floating off the coast of the United Arab Emirates, we noticed an airstrip called Al Hamra on the beach. We decided we could

knock out some runway work, considering none of us had practiced single-engine or autorotation procedures since we'd left home guard three months earlier. We cleared it with TACRON, and the next day we were on our merry way to Al Hamra so we could take full advantage of this opportunity.

Off to the runway we went. It was very long, about 8,000 feet, had a control tower, and was literally in the middle of nowhere. No facilities, no hangars, no nothing, except a runway, the tower, and a little house. We began our adventure with simple stuff like running landings and precision approaches and soon moved on to emergency procedures. The HAC decided he wanted to practice engine failures while hovering out of ground effect, so we began to set up for the emergency.

The Gulf is always hot in the summertime, but apparently this was a banner year for the heat index. The flight deck was approaching 150 degrees Fahrenheit, and the outside-temperature gauge in the cockpit was off the scale. You soon will see that single-engine work was not a great idea.

The flight deck was getting up to 150 degrees Fahrenheit, and the outside-temperature gauge in the cockpit was off the scale.

The HAC pulled into a 75-foot hover, instructed me to pull back the No. 1 engine, and ran through the procedures. When we practice in the benign, 70-degree environment of San Diego, the technique is to pause for a moment with the collective to allow the rotor rpm to decay, simulating an engine failure. This is exactly what the HAC did. I could even hear him saying over the ICS, "OK, pausing with the collective." By the time he had finished saying "collective," we had plummeted about 40 feet, the rotor speed (Nr) was rapidly decaying, and the HAC was yelling a string of expletives.

He tried to get Nr under control with little success. I threw the engine back into "fly," but still the helicopter and Nr continued to fall. In fact, Nr fell so low that the generators dropped off line, and I could actually watch the rotor blades go by, one by one. We dropped all the way down to 45 percent Nr, and I was sure the nosewheel strut was going to come crashing up through the center console when we hit the ground. I looked over at the HAC, who had the collective in his armpit and was doing his best to eliminate any drift so we wouldn't tip over when we landed. We hit the deck, with an almighty thump. The helicopter rattled a bit, the engine spooled back up, and Nr rapidly rose to 100 percent.

The crewman jumped out, inspected the aircraft and, amazingly, found no damage. We then debriefed what had happened and thanked our lucky stars that the H-46 is such a sturdy aircraft. Everybody knew why we had fallen to the ground like a rock: Because of the extreme heat, the power required exceeded the power available from one engine. More importantly, we had failed to recognize one of the key facets of ACT: situational awareness. We all knew the effect of heat on our performance, yet none of us acknowledged this fact before we began our maneuver. We had neglected to brief the practice emergency before starting it, and a near-catastrophe resulted. The HAC's ability to land the aircraft squarely and without drift helped us avoid bending or breaking the helo.

We could have done several things beforehand to control this practice EP. We could have tried single-engine-in-flight procedures to see if we actually were single-engine capable. We should have briefed this emergency before the flight, using our performance computation card. And we certainly should have used better headwork.

Lt. Kinsella flies with HC-11.

This Approach Is Going To Be Perfect

by LCdr. Scott Potas

Way back when, in 1994, I was a senior lieutenant in my first squadron tour. I always seemed to be the HAC for deck-landing qualifications, which meant I had to deal with all the nuggets coming down from the RAG and all the lieutenant commanders returning to flight operations after three years out of the cockpit. As most of you know, these guys can scare you on a dark night near a large mass of metal and water.

One particular night stands out. The pilot I was requalifying was a lieutenant commander who had just finished a tour in D.C. and hadn't flown in the shipboard environment for a while. I lifted off from the ship, demonstrated the textbook, NATOPS ship approach and easily landed the aircraft. Because we had starboard relative winds, I did the next takeoff, turned downwind, and handed the controls to him. He confidently took them and proceeded.

His roll to final and approach angle looked good. At one mile out, he was right on the numbers. Thirty seconds later, he was a little high, so he reduced collective to get back on glide slope. At a half mile, his descent went through the glide slope and continued all the way down to 50 feet, well into the area called "the black hole." I muscled the collective to keep him from lowering it farther and helped him pull in some power while I called for it. He recovered to the proper glide slope, and we landed.

His second approach was a carbon copy of the first, and so was the third. In each case, the only thing keeping us airborne was a power call and my firm grip on the collective, which prevented him from taking us for a swim. We recovered after the third approach, and he apologized to the aircrewman and me, saying, "I don't know what was wrong with me tonight!" The next pilot entered the aircraft and the DLQs continued. All I could think about was how screwed up that lieutenant commander was. I promised myself I would never get that low, that far behind the ship. My flying career would never find *me* putting the aircraft in the black hole.

Flash forward to 1999. I was a lieutenant commander on deployment in the Gulf during a super J.O. tour. I had plenty of hours and felt responsible for training my H2Ps to be at least as good if not better than me at landing on the ship. We were about two-thirds of the way through cruise, and I couldn't remember the last time I missed the trap.

I was flying with an H2P who was consistently high and fast coming into the ship. I was backing her up on her approach and noticed she was higher and faster than usual. I told her to bring it around again. This was the perfect time to show her the correct way to approach a small deck. I took the controls and started describing how she needed to do this and that to maintain glide slope on her approach to the ship.

This was also where my brain started to say, "Don't screw up this approach, be right on the numbers, right on the SGSI, amber-red interface all the way in!" I knew if I was going to say her approach was bad, I had to make damn sure mine was perfect.

I continued talking and training as I scanned the instruments and checked to make sure I had the SGSI perfectly in the amber-red zone. At one mile from the back of the ship, I had it nailed. At three-quarters of a mile, I was a little high and adjusted the collective to make the correction. At this point, my desire for perfection made me drop all my training and abandon my instrument scan. The SGSI was amber-red and it was going to stay that way. At that point, the world had stopped for me, and I tuned out everything except the SGSI.

My H2P and aircrewman pulled me back to reality with simultaneous screams: "Power! Power! Power!" I pulled up the collective like my life depended upon it and gained altitude in a hurry. My copilot asked if I was OK and offered to take the controls. The guy who would never get too low behind the ship had just missed the water, a half-mile behind the ship, by 19 feet at 50 knots. If not for my copilot and aircrewman backing me up and paying close attention to our altitude, we all would have been swimming… or worse.

My H2P suggested I regain my confidence and land the aircraft. After reestablishing my instrument scan, I recovered the aircraft on the next approach. I spent the next three weeks apologizing to her and my crew for nearly crashing.

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LCdr. Potas is safety officer at HSL-43.

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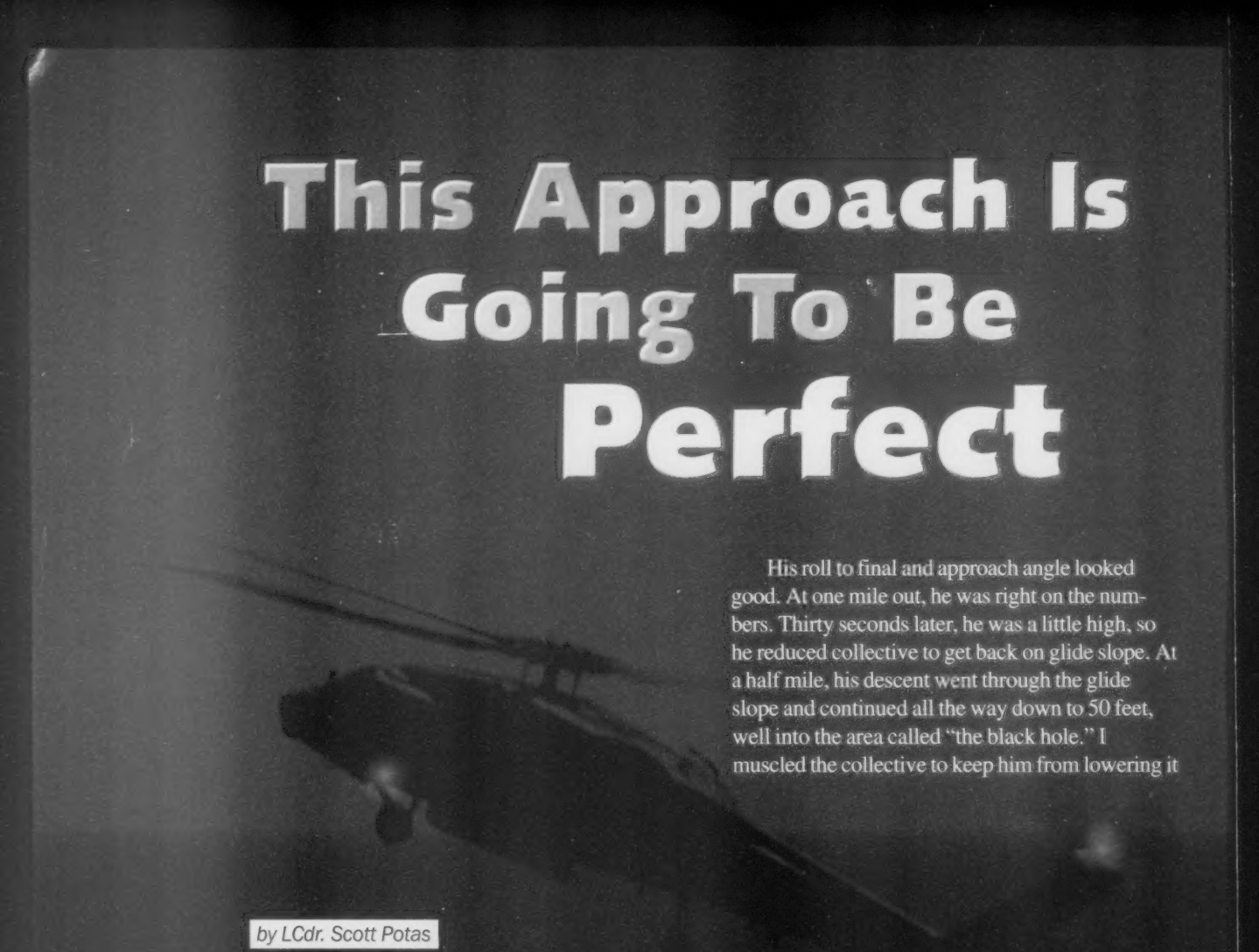

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LCdr. Potas is safety officer at HSL-43.

Don't Touch the Money

by Lt. John Hellmann

We had been doing everything right, but we still ended up all wrong. The way ahead was covered in fog. We had no communications with ATC, and both our helos had minimum fuel. How did we get in this predicament?

Our mission had been to ferry a pair of H-46s from Whidbey Island to San Diego. Our aircrews included four experienced aircraft commanders and two experienced crew chiefs. Bringing our aircraft back safe and sound was our only concern.

Those who have been to Whidbey Island in December need no description of the weather. A day without freezing temperatures and low ceilings is the exception to the rule. Being from sunny San Diego, we were all extra sensitive to weather hazards. We knew that glorious San Diego days were not going to come our way.

Freezing temperatures and low ceilings kept us from leaving on day one. Our wingman's radar altimeter was working intermittently, so we couldn't fly IFR. The weather cleared on day two, but, after another minor maintenance problem, our wingman wasn't ready to leave beautiful Oak Harbor, Wash. A FEDEX delivery, a maintenance all-nighter, and an FCF later, we were ready to go on day four after a full night's rest.

Day four brought back the poor weather, which was to worsen over the next two weeks. It was special VFR down through Puget Sound as far as Tacoma, but we decided a little bit of progress was better than none. When we reached Tacoma, we planned to traverse the valley along Interstate 5. Fog in low hills squelched this plan, and our fallback route (west to the coast) was cut off by a wall of clouds through the mountains. As briefed, we diverted to McChord AFB and waited.

National weather forecasts indicated that if we did not get south within the next two days, we likely would spend Christmas in the great Northwest. The weather inland through the valley still was doubtful, but the weather along the Oregon coast was reported CAVU as far as our destination at Coos Bay, only two hours away. As the weather in the Sound lifted a bit, we decided to head for the coast, even though there was only sporadic UNICOM radio coverage for 150 miles along the leg.

Shortly after takeoff, our wingman reported an intermittent leak in the transmission. We cautiously decided to return to troubleshoot. The leak ceased, and we decided to move out. We already had burned 20 minutes of our three hours of gas, but we opted not to top off since we were only two hours from our destination.

We pushed through the mountains by going above the clouds, assured by the weather folks that the weather was clear on the coast. Sure enough, we were greeted by beautiful sunny skies as we neared the Pacific Ocean. Who said we could not get San Diego weather in the Northwest? A feeling of elation swept through both cockpits. As we marveled at the beauty of the coast, speculation about the

continued on page 22

Out-Thinking the System, Almost

by LCdr. Ted Williams

It was certain to be an easy flight. I had flown a half-dozen or so FCF charlie profiles in the past few months, and today's looked like a repeat of yesterday's. The maintainers had done some tweaking and adjusting on the flaps, which had not been indicating full down in flight. Like most difficult gripes, the flaps were working like a champ on deck, but in flight would not come down all the way to 30 degrees. The EA-6B has two methods of lowering the flaps: the normal way (hydraulic), and the emergency way (electrical).

I was confident that I knew the system and this particular aircraft. On start-up, the flaps worked fine, just as they had the previous day. In flight, however, the discrepancy repeated itself. We couldn't get a full-down indication with either the hydraulic or electrical method. Anticipating that we wouldn't be able to duplicate the problem on deck, I was determined to help the ground-maintenance crew by troubleshooting in flight. I wanted to give them as much information and feedback as possible. I found that if I lowered the flaps hydraulically and, when they had finished travel, used the electrical method, I was able to achieve a full-down indication. The opposite was also true: I could lower them electrically, then use the hydraulic method to assist. "Great," I thought, "I can give the airframers some good information to help them fix this problem."

After dirty-up on a straight-in, using electrical flaps to assist the hydraulic actuators, we took an uneventful carrier arrestment. I cycled the flaps on deck and found that I was able to duplicate the problem. "Even better," I thought. "Now the ground crew can see firsthand what I was experiencing in flight. We'll have this problem fixed in no time and the aircraft up and flying missions again."

After shutting down and climbing out of the aircraft, I was surprised to see the entire ground crew huddled around the port inboard flap. I thought the airframers would find something of interest, but what would an ordie or a PC care about an errant flap? I soon saw the problem. The flap-drive, span-wise shaft was so badly twisted and torqued that the flap was frozen in position and would not have moved again, even if I had tried. By troubleshooting in flight, I had managed to locate the problem, but in doing so, I had almost torn off the flap and had severely endangered my crew. Instead of troubleshooting in flight, I should have left it to the maintainers.

In short, what appeared to be a rather easy, routine flight actually could have become much more exciting because of my overconfidence and eagerness to troubleshoot. In the future, I'll be sure to go only as far as the checklist allows, despite what I might think the problem is, and leave the true troubleshooting to the experts on the deck.

LCdr. Williams was the operations officer for VAQ-136 at the time of this incident. He has since been transferred to McDill AFB.

PH3 Carrie-Anne Gonzalez

by Lcdr. David Silkey

At Least I Wasn't th
Who Didn't Know W

We had just heard a blow-by-blow account of an FA-18 pilot's ride in the nylon, following a night ejection during a JDAM strike into the Fallon Range Complex. He drove home the fact that an ejection from 35,000 feet on a dark winter's night over the deserts of Nevada was an extremely cold undertaking! Before he separated from the seat, the cold had forced him into the fetal position several times in an attempt to keep his arms and legs warm. This sobering discussion left me with a healthy respect for a high-altitude winter ejection.

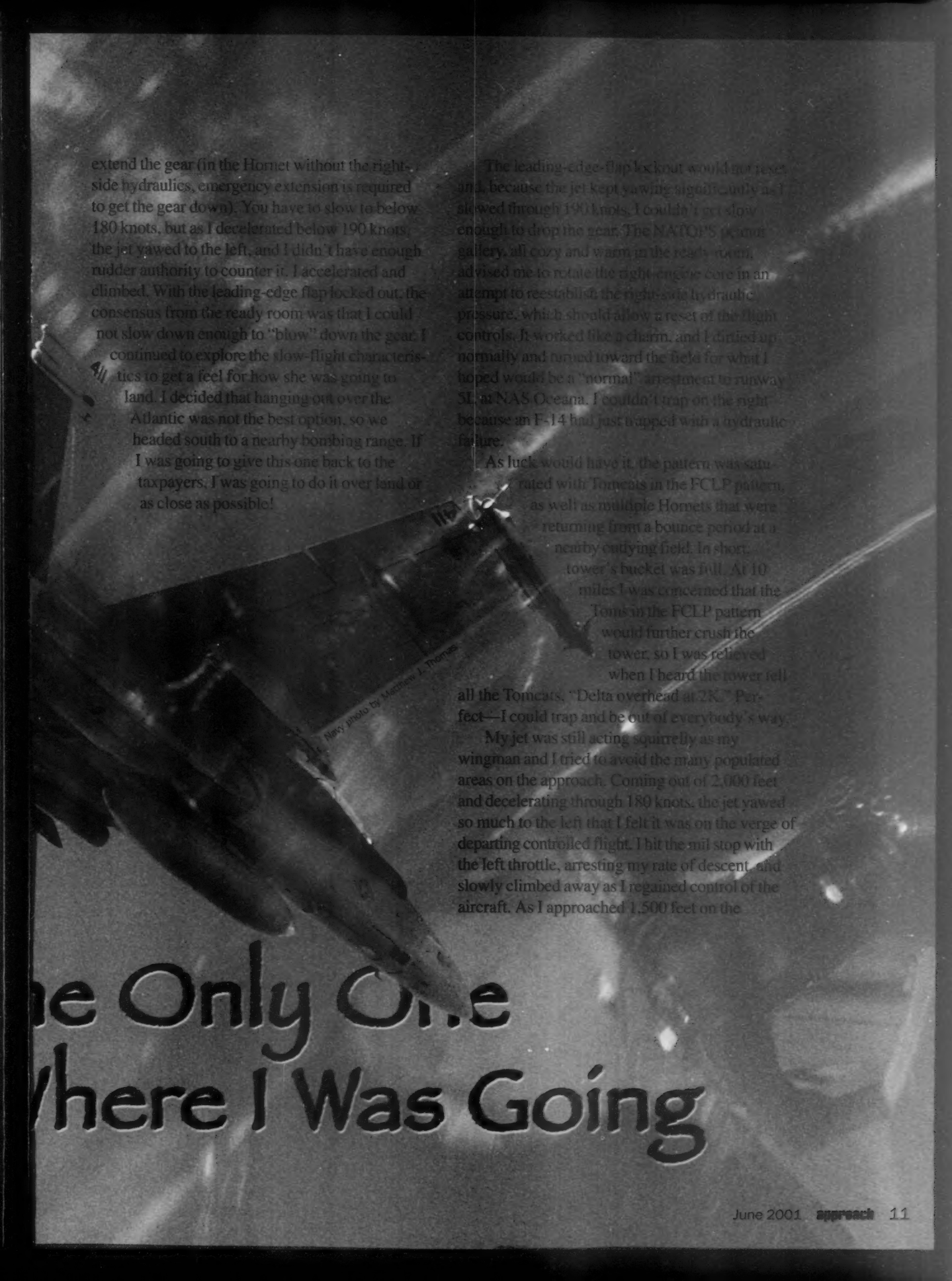
Two days later, I was fragged for a post-maintenance check flight on one of our Lot 18 Hornets. The jet's right engine had been replaced recently, which meant it should have been a straightforward PMCF. The maintenance brief covered the engine swap, as well as a flight-control adjustment, which had been done in response to a pilot's recent concern over the jet's handling characteristics in high-speed flight regimes. I hadn't been aware of this flight-control problem, so I made a mental note and signed the book.

There were two PMCF hops on our schedule at the same time, so we discussed airspace de-confliction and dry-suit requirements. The water was between 50 and 60 degrees and the air temp was above the minimum for exposure suits. The combination of those temperatures made the use of dry suits "optional," according to our SOP. We opted for comfort.

Start, taxi, takeoff and the PMCF portion of the hop were uneventful. I wrapped up the final checks and pointed her home as I began cleaning up the cockpit. It was a beautifully clear autumn day, and I had just settled in for an enjoyable flight home when Betty sang, "Deedle... deedle... engine right... engine right." In the Hornet, Betty usually doesn't offer good news, and this was no exception; my right engine had flamed out. I wasn't worried, because the Hornet flies effortlessly single-engine. However, as the hydraulics on the right side began to fall off line, I was warned of a right leading-edge-flap lockout. Now I was very interested.

After a failed attempt at a flight-control reset, I called base to let them know what was up. By this time, our other airborne PMCF had joined on me to help. A quick check of my nav display showed me 75 miles from home plate, most of which was feet wet. As I gazed down at a chilly and angry Atlantic, I remembered the story about the freezing ejection, and I longed for the discomfort of my poopie suit.

The over-water transit was uneventful. Approaching the beach, I prepared to emergency



e Only One
Where I Was Going

extend the gear (in the Hornet without the right-side hydraulics, emergency extension is required to get the gear down). You have to slow to below 180 knots, but as I decelerated below 190 knots, the jet yawed to the left, and I didn't have enough rudder authority to counter it. I accelerated and climbed. With the leading-edge flap locked out, the consensus from the ready room was that I could not slow down enough to "blow" down the gear. I continued to explore the slow-flight characteristics to get a feel for how she was going to land. I decided that hanging out over the Atlantic was not the best option, so we headed south to a nearby bombing range. If I was going to give this one back to the taxpayers, I was going to do it over land or as close as possible!

The leading-edge-flap lockout would not reset, and, because the jet kept yawing significantly as I slowed through 190 knots, I couldn't get slow enough to drop the gear. The NATOPS pearl gallery, all cozy and warm in the ready room, advised me to rotate the right engine core in an attempt to reestablish the right-side hydraulic pressure, which should allow a reset of the flight controls. It worked like a charm, and I climbed up normally and turned toward the field for what I hoped would be a "normal" arrestment to runway 5L at NAS Oceana. I couldn't trap on the right because an F-14 had just trapped with a hydraulic failure.

As luck would have it, the pattern was saturated with Tomcats in the FCLP pattern, as well as multiple Hornets that were returning from a bounce period at a nearby outlying field. In short, tower's bucket was full. At 10 miles I was concerned that the Toms in the FCLP pattern would further crush the tower, so I was relieved when I heard the tower tell all the Tomcats, "Delta overhead at 2K." Perfect—I could trap and be out of everybody's way.

My jet was still acting squirrelly as my wingman and I tried to avoid the many populated areas on the approach. Coming out of 2,000 feet and decelerating through 180 knots, the jet yawed so much to the left that I felt it was on the verge of departing controlled flight. I hit the mil stop with the left throttle, arresting my rate of descent, and slowly climbed away as I regained control of the aircraft. As I approached 1,500 feet on the

Navy photo by Matthew J. Thomas

by LCdr. David Slikey

At Least I Wasn't th
Who Didn't Know W

We had just heard a blow-by-blow account of an FA-18 pilot's ride in the nylon, following a night ejection during a JDAM strike into the Fallon Range Complex. He drove home the fact that an ejection from 35,000 feet on a dark winter's night over the deserts of Nevada was an extremely cold undertaking! Before he separated from the seat, the cold had forced him into the fetal position several times in an attempt to keep his arms and legs warm. This sobering discussion left me with a healthy respect for a high-altitude winter ejection.

Two days later, I was fragged for a post-maintenance check flight on one of our Lot 18 Hornets. The jet's right engine had been replaced recently, which meant it should have been a straightforward PMCF. The maintenance brief covered the engine swap, as well as a flight-control adjustment, which had been done in response to a pilot's recent concern over the jet's handling characteristics in high-speed flight regimes. I hadn't been aware of this flight-control problem, so I made a mental note and signed the book.

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Navy photo by Matthew J. Thomas

climbout, I found myself beak-to-beak with the F-14s established overhead in the Delta pattern.

As we climbed away, my wingman said that it appeared the right engine was beginning to smoke and that I should probably secure the rotating right-engine core, which I did. My mind was reverting to "brain stem" power, and I needed to land the jet ASAP. Heading northbound, I wrestled with the notion of button-hooking back to runway 23, but

"Is there anything else that can possibly be going on while I try to land this jet?" I wondered.

when I looked at the approach corridor, I changed my mind: It was nothing but high-rise hotels. I began to subconsciously include populated areas into my decision matrix for available runways. Out of ideas and fuel (1.9 on the IFEI), I chose to arc for a runway 32L arrestment.

As I arced toward the initial for that runway, I took stock. An F-14 was still in the gear on runway 5R, a Hornet was on short final to runway 5L for an arrestment (thanks to an unsafe-gear indication), and his wingman had just declared an emergency because of his fuel state. There were four F-14s hanging out overhead the field at 2,000 feet and numerous Hornets returning to Oceana from the bounce period at the outlying field.

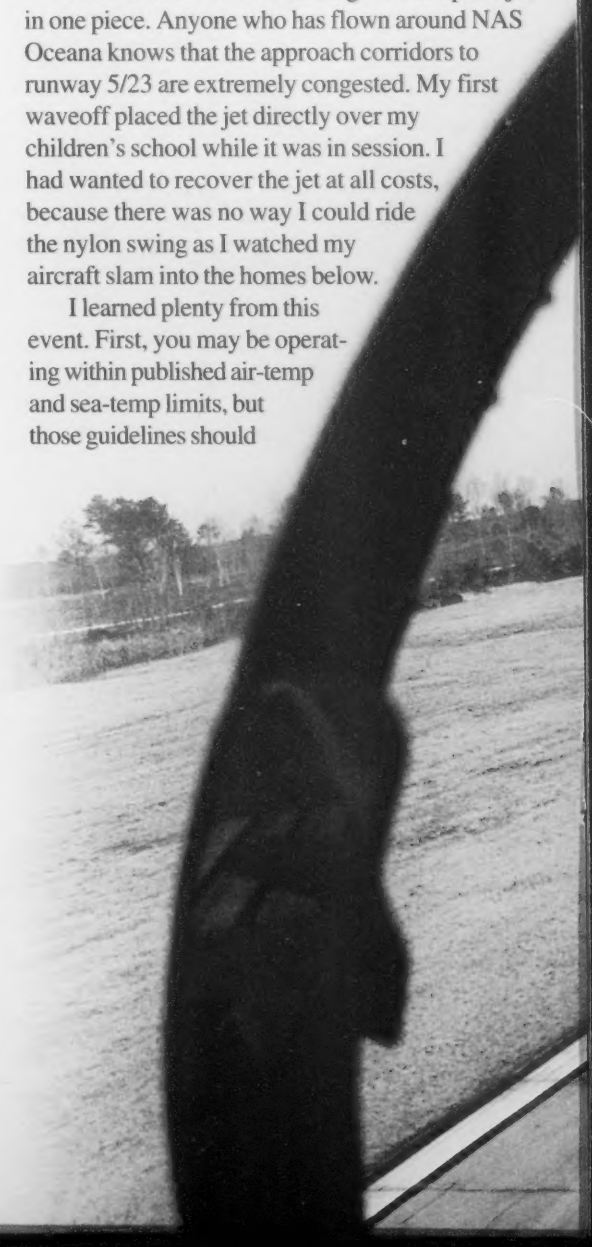
"Is there anything else that can possibly be going on while I try to land this jet?" I wondered. The chatter, for which I deserved a lion's share of the blame, had become a major distraction. As the tower freq became unusable with multiple requests for takeoffs, expected delay times, and landing clearances, someone in the tower mercifully blew the whistle. The next call I heard was "Ninety-nine, we have an FA-18 in an emergency, and we are not sure what he is doing or where he is going. Stand by!" It was comforting to know that I wasn't the only one who didn't know where I was going.

Once again out over the chilly Atlantic, I slowed the jet to 180 knots, and immediately the jet yawed to the left, followed by an immediate yaw to the right and then back to the left. I had seen enough and accelerated once again, then stubbornly decided to give the jet one more chance at slowing down. Landing a Hornet at 220 knots is neither a natural nor a comfortable act. The follow-on attempt yielded similar results, so I elected to stay fast. This was the only airspeed that provided a predictable and constant level of yaw that I could counter with full rudder.

I flew the approach at 220 knots all the way down and, with minimal headwind, grabbed the wire on the fly. I estimate the engagement speed to have been about 213 knots, well above the 175-knot limitation of the E-28 gear.

I was amazed that I'd managed to keep the jet in one piece. Anyone who has flown around NAS Oceana knows that the approach corridors to runway 5/23 are extremely congested. My first waveoff placed the jet directly over my children's school while it was in session. I had wanted to recover the jet at all costs, because there was no way I could ride the nylon swing as I watched my aircraft slam into the homes below.

I learned plenty from this event. First, you may be operating within published air-temp and sea-temp limits, but those guidelines should



never supersede your good judgment. I feel certain that if I had worn a dry suit, I would have tried to slow down the jet out over the water. I would not have felt the need to fly south to get over land. This would certainly have afforded me more time to troubleshoot the jet and attempt to solve the slow-flight problem. It would no doubt have given me extra time to consider other options. In the end, I took a jet that was questionable in its controllability and made a landing at an airspeed that exceeded the published limitation for the arresting gear. Wearing a dry suit might not have changed the outcome, but at least environmental issues would not have entered my decision matrix.

Decide in advance—and include in your briefing process—what runway you would go to in the event of a significant emergency. The time to determine the least-populated approach corridor is not when you're in the middle of a compound emergency. If you have to shell out of a jet, shopping malls, high-rise hotels, and schools are going to adversely affect that decision, as they should.

During this emergency, the rep I had been talking with assumed that I had trapped on my first attempt at runway 5 and subsequently walked on to his own flight. As he started his jet, he was shocked to hear on base radio that I was still airborne and in extremis. If you are in the ready room advising an airborne emergency, see it to its conclusion. In my case, I had a bunch of extra base-radio comms, explaining for a second time what we had done, what we were doing and what we were going to do.

Although we weren't a coordinated section, my wingman of opportunity provided invaluable assistance when I started to get frazzled. Crew coordination worked for us, not because we briefed it but because we were like-minded.

Tower needs to control the pattern and make timely decisions. They can't do it without information from inbound aircraft that are having emergencies. I was task-saturated that day and gave them what I could, when I could. In the midst of an airborne emergency, if you find yourself waiting at the hold short for an extended period of time, be patient. Continually requesting immediate departures, asking for delay times, and telling tower, "You have to get a handle on this," only adds to the confusion and frustration. It's not only embarrassing, but it makes you look like an amateur.

LCdr. Silkey flies with VFA-37.

Navy photo by Matthew J. Thomas

SKATING ON THICK

by 1stLt. Cory Shackelton

As everyone knows, one of the best things about flight school is the cross-countries. You get out of the local area, talk to different controlling agencies, and learn lessons you can't possibly learn close to home. I had no idea how much I would learn on my recent cross-country from South Whiting Field to Little Rock AFB.

The first three legs of our cross-country went fine. At McKellar Sipes Regional in Jackson, Tenn., we called flight service to get the weather and file for our next leg, an airnav to Little Rock. Weather in Jackson was reported as overcast at 1,500 feet; winds were 350 at 10, gusting to 15; visibility was 5 miles. Little Rock was reporting overcast at 3,500; winds 360 at 14, gusting to 20; and visibility unrestricted. The FSS briefer also told me there was icing from 6,000 to 14,000 feet. I didn't think it would be a problem, since we were filing for 4,000 feet. I filed our flight plan with the briefer, found my instructor, and updated him. I gave him all the weather data and made sure I told him about the icing levels.

We launched out of Jackson, contacted FSS, activated our flight plan, and leveled off at 4,000 feet. At this point, I passed the controls to my instructor so I could complete the level-off checklist. I broke out the PCL. The first step is "Check OAT and engage anti-ice and pitot heat as required." I checked but did not report the OAT and made sure the anti-ice and pitot heat were on.

I took back the controls and flew for approximately 15 minutes before I heard my instructor say, "Tell approach we're in rime icing and would like to descend to our minimum altitude." For the first time in several minutes, I looked up from the instruments and saw rime ice on our windscreen. I contacted approach, got cleared to 3,000 feet, and started to descend. My instructor looked up approaches and evaluated our options. We flew at 3,000 feet for several minutes but couldn't clear the ice. We contacted approach and requested to divert to Millington, with vectors for the ILS. Memphis approach quickly approved our request and started vectoring us for the approach.

I gave the controls to the instructor so I could get out my approach plate and brief the approach. I then took the controls and shot the

ICE

...one-quarter to half an inch had built up on the mast, pitch-change links and skid cross tubes.

ILS into Millington. Once we reached decision height, my instructor took the controls and taxied to the ramp. As I watched sheets of ice being thrown off our rotor blades, I realized how serious the icing had been. Watching my instructor, I noticed that, in order to hover, he had to put in more control inputs than I had seen since I tried to hover during Fam 1.

Once we shut down, we got out and walked around the helo, staring at the large amount of ice that had built up in such a short time. We only had flown in icing for approximately 15 minutes, yet one-quarter to half-an-inch had built up on the mast, pitch-change links, and skid-cross tubes. Ice the size of a golfball also had built up on our static drains. My knees got a little weak as I realized just how lucky we had been. We called back to our squadron and told them we were safe on deck, then called for the weather again. We decided to finish the flight as an o-nav and fly under the weather. We made it to Little Rock, and the rest of our cross-country turned out fine.

The biggest lesson I learned was that when doing a checklist, consider all of NATOPS, not just what the checklist says. I didn't recall the NATOPS warning that states, "Intentional flight in any known icing condition (less than four degrees Celsius in visible moisture) is prohibited." We had been flying in the clouds with an OAT of two degrees.

I also learned a lot about crew coordination. If nothing else, I should have communicated to my instructor exactly what the OAT was. This might have prevented us from flying into icing conditions. Looking back, it probably was not a good idea to hand over the controls to get out my approach plate. I had established a good instrument scan, and my instructor had been looking out at the ice building up. I should have had him talk me through the approach so I could maintain my instrument scan, instead of putting him in a situation that could cause vertigo.

I also learned you should not blindly believe what the weather-guessers tell you, because they could be wrong. The final lesson I learned was that I should have gone to Key West.

1stLt. Shackelton was a student in HT-18 when he submitted this article.

STRAIGHT DOWN AT 610 KNOTS

by Lt. Zach Mosedale

Dark night, no moon, no goggles—I don't recommend that you try this at home. But as a first-tour pilot fresh out of the FRS, I couldn't wear night-vision goggles because it was too dark, and I didn't have my mean-starlight qualification yet.

We had briefed a 2 v 2 AIC mission. Since our CAP point was 130 miles from the ship, and we only had an hour cycle, there wasn't much time to get started on the intercepts. As soon as we got on station, the bandits echoed, "Fight's on," and we turned in. I kept my eyes on the lead, lit the afterburners, and nosed the plane over. I watched the wing-sweep gauge work its way back (meaning the wings were sweeping normally) and saw the airspeed gauge approach mach 1.0.

I looked to the right at my lead and saw our aircraft was surrounded by a blue glow from the afterburners. As I moved the stick to the right, it wouldn't go past slightly left. We were going 630 knots into a night where you couldn't tell which way was up without your instruments.

The plane rolled off to the left, and I calmly said, "Cheese, I don't have control of the plane," while moving the throttles out of burner and to idle. The plane continued to roll left into a 90-degree angle of bank, so I continued the roll 270 degrees to the left to get back upright. The RIO said, "Understand you don't have control of the jet."

"I do not have control right now," I replied. The aircraft continued to roll left. I had full right rudder, but the stick wouldn't go right; it only would go forward, aft, and left. My RIO started to methodically call out airspeed and altitude, which meant one thing: If things didn't change quickly, we were ejecting. We rolled 360 degrees twice.

Thanks to the magic of time compression, I had plenty of time to think, "We are in the middle of the Red Sea, it is very dark, the helo will take forever to find us, and people can die in an ejection."

For some reason, I was inspired to manually jam the wings full forward. That freed the controls. I announced, "I've got it."

"Understand you have control of the plane."

"I jammed the wings full forward and got control."

We knocked it off and went home. I won't bore you with the gory details, but we were jazzed for the always-fun night carrier landing.

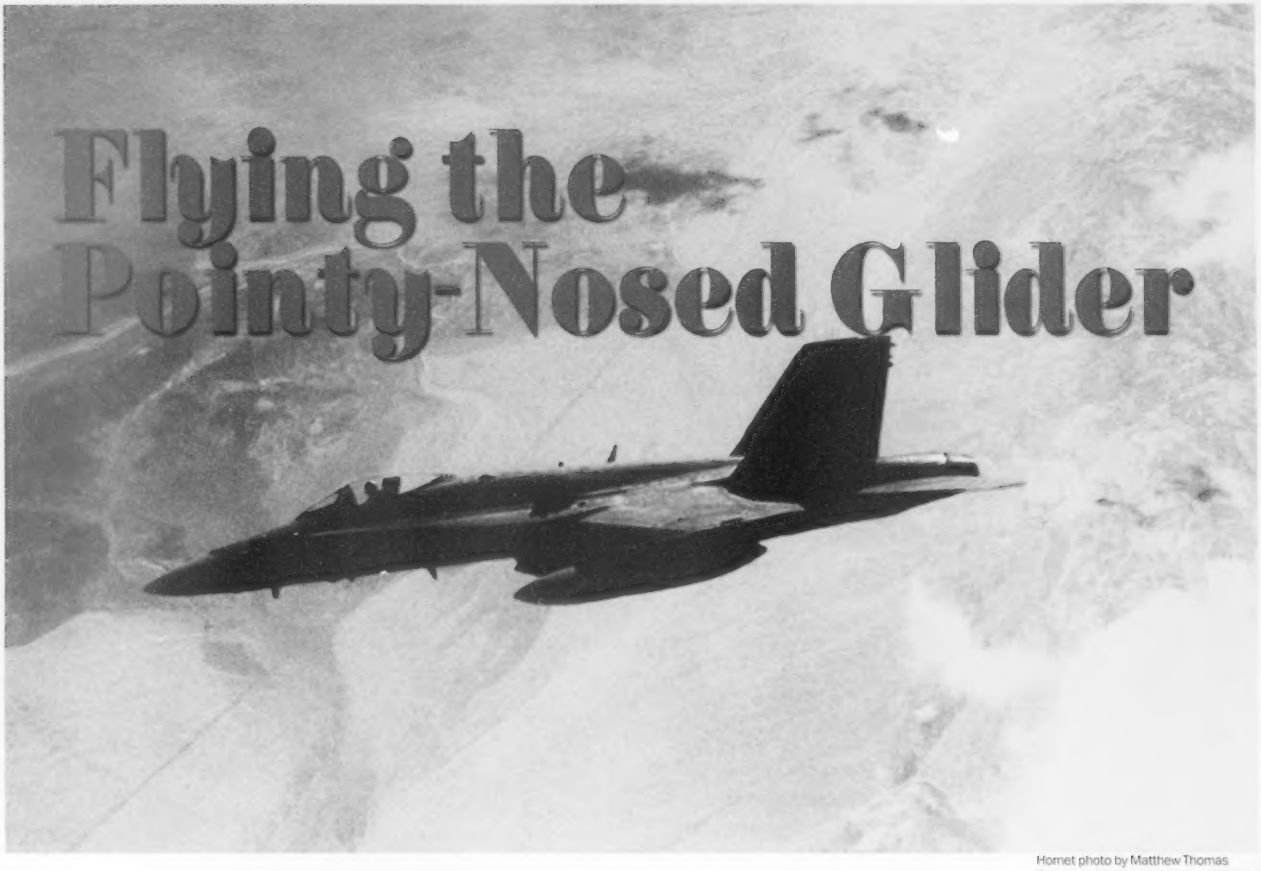
The RIO said, "Understand you don't have control of the jet."

Reviewing the tape, we found the whole episode took only five seconds; it felt like at least a full minute. We lost 8,000 feet, bottomed out at 14,000 feet, and were going 610 knots almost straight down at recovery. As I thought about it in my stateroom that night, the cloud of invincibility that seems to shroud us exited stage left. What would you think of your chances of surviving an ejection at that speed?

FOD was binding the controls. A connector in the rear cockpit display had been improperly installed at the depot a few months earlier. When I threw the wings forward, we decelerated so quickly that the FOD must have come free. I never had taken FOD as seriously as some of my seniors and peers. Now I know better.

Lt. Mosedale flies with VF-102.

Flying the Pointy-Nosed Glider



Hornet photo by Matthew Thomas
Background photo by Jeremy Williams
Composite by Yvonne Dawson

by LCdr. Marc Pritchard

We were just days away from a six-week RIMPAC exercise. As the operations officer, I was pushing to get all of the FCLPs out while maintaining a bit of tactical flying for myself before deployment. Our maintenance department was working hard to get all of the aircraft ready. One was coming out of the CIT MOD and another, 403, was ready to go after the mechs reworked the innards of the No. 4 fuel cell.

The phone rang just after noon: 403 was ready for a check flight. All they needed was the stick actuator. Jumping on that call, I bounded downstairs, read the book, suited up, and strapped in for what I thought would be an uneventful 1.0 of flight time.

I started both engines. The checklist says to shut them down one at a time using the fire light, and then restart using bleed air from the operating engine. After doing the procedure on the left engine, I punched the fire light for the right. I expected the right engine to eventually shut down because of fuel starvation, but I was surprised when the left engine began to unwind. I quickly advanced the left throttle, figuring I must not have seated it firmly in the ground-idle position. The engine returned to its normal idle rpm. Satisfied that I had caused and then corrected the problem, I sat there, still waiting for the right engine to quit. But once again, before the right engine dropped off line, the left engine spooled down.

I called for the mechs and other troubleshooters to check for causes of the left-engine flameout. With no answers forthcoming and still not convinced that this could have somehow just been the work of "stray trons," I decided to take it from the top. After removing all power from the aircraft, I restarted the jet

and completed all ground checks without incident.

I did a little on-the-fly ORM and asked myself, "Hey! What if this engine thing happens while I'm airborne?" Had I been smart enough to stop and figure out the answer to that question, I wouldn't be writing this article. But since doing what you know is right rarely makes as good a story, and the voices of reason in my head were being outshouted by the clamor to get the job done, I pressed on. Besides, the odds against a dual-engine flameout in a Hornet had to be astronomically in my favor.

Nonetheless, the question of what you would do in an airplane with two dead motors is a good one. You can scour the manual for eternity looking for the answer. It isn't exactly a standard FA-18 procedure, you understand. As I taxied out of the line, I came up with a game plan I could use if the remotest of remote rarities were to happen. I figured I'd just dump the nose, reset both fire lights, keep the airspeed up, and one of the engines should restart.

Just like it took less than a rocket scientist to go flying in that jet, it doesn't quite take a brain surgeon to figure out where this story is going. Crossing into the operating area over the Sierra Nevadas (the geography will come into play shortly), I descended to 18,000 feet at around 300 knots to start the checks. After completing the same fire-light shutdown that I had done on the left engine on deck, and with the engine back on line, I pressed the right fire light. Imagine my surprise when both engines spooled down.

At 18,000 feet over the Sierra Nevadas, you are only 4,000 to 6,000 feet above the rocks. Normally, in a powered aircraft or one with a glide ratio better than a Lady Kenmore, this is not a problem. I, unfortunately, wasn't flying either of those, and the laughter from the warning voices I ignored back in the chocks was deafening.

Dusting off the brief I had given myself on the taxiway, I dumped the nose, reset the fire lights, kept up my airspeed, and waited for one of the engines to relight. I was amazed at how quiet it was.

After 10 to 15 seconds that seemed like an eternity, the rapid restart I had hoped for was obviously not forthcoming. The engines, in fact, had continued to slow, and the rpms were settling down through the high teens. At this point, my training took over. I realized I needed to clean up the cockpit and prepare for ejection. I loosened my mask so I could breathe (something that hadn't been a priority for the last couple of minutes), took off my kneeboard cards, and got my body in position.

The engines were rotating enough to provide hydraulic power to the actuators, so the stick-and-rudder aspects of flying a pointy-nosed glider were not that demanding. I continued to keep the knots up and was far enough over the mountains that Owens Valley was quickly approaching. With a small canyon providing me additional altitude to trade for airspeed, I made my way down.

I would like to tell you how my ejection plans were progressing, but I was still in denial, trying to come up with some way not to let down the team. I ran through possible

continued on page 24

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What Do You Me
They Went Inad

Staff Sgt. James V. Downen Jr.

by CWO3 Michael K. Phillips, USA

title of this article was my response when, as the unit safety officer, I heard that one of our crews had "punched in." Of all the times for it to happen, it occurred during a deployment to Bosnia, over mountainous terrain, and at night while wearing NVGs. If that weren't bad enough, the flight was a medevac mission with a patient on board. The two pilots had a total of about 800 flight hours; the pilot-in-command (PIC) had some additional civilian flight experience and was considered one of the more squared-away PICs in the company.

I used to consider inadvertent IMC a "self-induced emergency caused by pilot error." For the most part, I still think that's true, but I guess there are times when you just can't see the clouds. Or, if you're wearing NVGs, by the time you realize that you're in a cloud, it's too late to continue VMC.

I never gave inadvertent IMC much thought until that day. We're not supposed to and we have procedures in place in case we do it. Hardly anybody ever does anyway, so why worry about it? I've been in Army aviation for more than 11 years and had never been in a unit when a crew had gone inadvertent IMC. This perfect track record had lulled me into a false sense of security. It made me to think it couldn't happen, or wouldn't happen. Not on my watch anyway.

We train our crews to avoid it at all costs. We tell them over and over, don't try to fly VFR in IFR conditions. It's dangerous. We've all seen the Safety Center posters showing the catastrophic results. If weather is bad, don't fly. If you launch and the weather gets bad, turn around and go back, or land and wait it out. Or, if you are trained, equipped, prepared, and proficient for IMC flight, request an IFR clearance from ATC and continue the mission IMC. Of course, that last option may not always be available in Bosnia, or on other deployments, depending on local Navaids and instrument approaches.

The question is, have we all been lulled into a false sense of security? We've all heard the old pilot joke, "If it's too bad to go IFR, we'll go VFR." To avoid going IFR, many of us have gone scud running. A Federal Aviation Administration

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publication[1] defines "scud running" as "pushing the capabilities of the pilot and the aircraft to the limits by trying to maintain visual contact with the terrain while trying to avoid physical contact with it."

I've had several encounters with deteriorating weather while flying VFR. Many times, I simply turned around and went home. On a few occasions, I radioed ATC and received an IFR clearance so I could continue the mission IMC. But I've never gone inadvertent. I've turned down countless missions (including medevac missions) because of poor weather. Somehow it's easier to refuse a mission while standing in the flight operations office than to refuse to continue to fly a mission while in the air. We all want to succeed in our mission, especially if that mission is to save a life.

There are times when a patient's only hope of survival may be via a flight on a military helicopter. Air ambulance units, like the one I'm in now, are frequently called upon to fly in poor weather and at a moment's notice. All too often, Dustoff crews will fly a medevac mission in weather that they wouldn't even consider flying in on a training flight. I've certainly been there, done that. The desire to succeed can easily turn into perceived pressure to complete a mission, particularly a medevac mission. That pressure is almost always self-induced and is felt by pilots and even non-rated crewmembers. Commanders will always support crews that turn down missions for safety reasons.

According to an NTSB study[2], unplanned entry into IMC is the single most common factor in fatal crashes involving emergency-medical-service helicopters. Because most of the inadvertent IMC accidents result in pilot fatalities, accident investigators can learn little about the events that lead to the accidents. In cases where pilots lived to tell their stories, it's like the Safety Center has been telling us all along: they tried to fly VFR in IFR conditions. They also felt pressure to accomplish the mission, in spite of deteriorating weather.

The Army has procedures that prepare us in the event that we do go inadvertent IMC. We brief procedures with the crew prior to every flight. The Aircrew Training Manual clearly states, step-by-step, what to do. Local SOP also provides guidance in case we accidentally punch in.

On the night when our crew went inadvertent, they did everything by the book, just like they were taught. The PIC briefed inadvertent-IMC procedures to the crew before the mission. The pilots got a valid weather briefing and had even updated it just before takeoff. The PIC had the only available instrument-approach procedure open and strapped to his kneeboard, and approach control frequencies were set in the radios. (The weather forecast had called for better-than-VFR conditions.)

About five minutes after takeoff, the pilots watched as the ground lights started to fade, flicker, and then disappear. They controlled the aircraft just like the ATM tells them and began the local inadvertent-IMC recovery procedures. At first, they felt fear, anxiety, and nervousness; the first 30 seconds were the worst. Once they knew that the aircraft was under control and they transitioned from NVGs to instruments, they felt much better. This crew was prepared for the worst when it happened. With the assistance of ATC, the aircraft broke out on final of an ILS approach and landed safely.

Now I know that sometimes aircrews really do go inadvertent IMC. Now I know that pilots can't always see the clouds as they approach them. Now I know that the inadvertent-IMC procedures in the ATM and the SOP work. And now you know, too.

[1] "Aeronautical Decision Making for Helicopter Pilots." FAA Report No. DOT/FAA/PM-86/45, February 1987.

[2] "Every Helicopter Pilot Must Be Prepared for Inadvertent Entry into Instrument Meteorological Conditions," by Jowl S. Harris. Published by the Flight Safety Foundation in March-April 1996.

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What Do You Me
They Went Inad

Staff Sgt. James V. Downen Jr.

by CW03 Michael K. Phillips, USA

The title of this article was my response when, as the unit safety officer, I heard that one of our crews had "punched in." Of all the times for it to happen, it occurred during a deployment to Bosnia, over mountainous terrain, and at night while wearing NVGs. If that weren't bad enough, the flight was a medevac mission with a patient on board. The two pilots had a total of about 800 flight hours; the pilot-in-command (PIC) had some additional civilian flight experience and was considered one of the more squared-away PICs in the company.

I used to consider inadvertent IMC a "self-induced emergency caused by pilot error." For the most part, I still think that's true, but I guess there are times when you just can't see the clouds. Or, if you're wearing NVGs, by the time you realize that you're in a cloud, it's too late to continue VMC.

I never gave inadvertent IMC much thought until that day. We're not supposed to and we have procedures in place in case we do it. Hardly anybody ever does anyway, so why worry about it? I've been in Army aviation for more than 11 years and had never been in a unit when a crew had gone inadvertent IMC. This perfect track record had lulled me into a false sense of security. It made me to think it couldn't happen, or wouldn't happen. Not on my watch anyway.

We train our crews to avoid it at all costs. We tell them over and over, don't try to fly VFR in IFR conditions. It's dangerous. We've all seen the Safety Center posters showing the catastrophic results. If weather is bad, don't fly. If you launch and the weather gets bad, turn around and go back, or land and wait it out. Or, if you are trained, equipped, prepared, and proficient for IMC flight, request an IFR clearance from ATC and continue the mission IMC. Of course, that last option may not always be available in Bosnia, or on other deployments, depending on local Navaids and instrument approaches.

The question is, have we all been lulled into a false sense of security? We've all heard the old pilot joke, "If it's too bad to go IFR, we'll go VFR." To avoid going IFR, many of us have gone scud running. A Federal Aviation Administration

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publication[1] defines "scud running" as "pushing the capabilities of the pilot and the aircraft to the limits by trying to maintain visual contact with the terrain while trying to avoid physical contact with it."

I've had several encounters with deteriorating weather while flying VFR. Many times, I simply turned around and went home. On a few occasions, I radioed ATC and received an IFR clearance so I could continue the mission IMC. But I've never gone inadvertent. I've turned down countless missions (including medevac missions) because of poor weather. Somehow it's easier to refuse a mission while standing in the flight operations office than to refuse to continue to fly a mission while in the air. We all want to succeed in our mission, especially if that mission is to save a life.

There are times when a patient's only hope of survival may be via a flight on a military helicopter. Air ambulance units, like the one I'm in now, are frequently called upon to fly in poor weather and at a moment's notice. All too often, Dustoff crews will fly a medevac mission in weather that they wouldn't even consider flying in on a training flight. I've certainly been there, done that. The desire to succeed can easily turn into perceived pressure to complete a mission, particularly a medevac mission. That pressure is almost always self-induced and is felt by pilots and even non-rated crewmembers. Commanders will always support crews that turn down missions for safety reasons.

According to an NTSB study[2], unplanned entry into IMC is the single most common factor in fatal crashes involving emergency-medical-service helicopters. Because most of the inadvertent IMC accidents result in pilot fatalities, accident investigators can learn little about the events that lead to the accidents. In cases where pilots lived to tell their stories, it's like the Safety Center has been telling us all along: they tried to fly VFR in IFR conditions. They also felt pressure to accomplish the mission, in spite of deteriorating weather.

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Don't Touch the Money

continued from page 8

weather was replaced by talk of going home and jokes about stopping to ride the perfect, rolling waves, like the Army air cav did in "Apocalypse Now." We had gambled and hit the jackpot. But then we touched the money too soon.

With a GPS to back us up, we were able to make instant fuel calculations. A 40-knot headwind meant we had just enough gas to make our destination, but it was going to be tight. Should we stop in Astoria with two hours of gas remaining or press on? Encouraged by the flawless weather, we pressed on.

Cruising along at 500 feet, about 10 miles off the coast, we found that our good weather was not going to last even an hour. Right after our go-no-go point to return to Astoria, we encountered a few wisps of clouds. Before we knew it, our route forward and our path of retreat were blocked by fog. In a matter of 10 minutes, we had gone from CAVU to less than a mile in fog.

This was not good. We pulled out the charts. A small field with a TACAN station was 20 miles away in Newport, but it had no approach. Our destination had an approach, but we would not have fuel for a divert or a second approach if the weather there also was deteriorating. We had no comms with anyone. Could it get worse?

You bet. Our wingman called "lost sight" and reported that his radar altimeter, which had been intermittent, had decided to fail entirely. They were flying off of the barometric altimeter, but I could hear that they were not comfortable. None of us were.

A harried call to Newport UNICOM yielded a friendly voice of a Coast Guard pilot who was flying along the coast in his H-65. Relieved to be in contact with someone, we got his weather report: visibility 1.5 miles and ceiling 500 feet. To two H-46 crews, flying at 150 feet to maintain visual reference with the water, his weather report was a description of Shangri-La. Our separated flight of two made a beeline for Newport's TACAN station, reporting radial and DME positions to each other so we could maintain horizontal separation.

We had gambled and hit the jackpot. But then we touched the money too soon.

As promised by our Coast Guard compatriot, we started to make out the coastal landmarks just before going feet dry. Using our charts, we were able to orient ourselves and pick up on the airfield. We touched down, followed shortly by our wingman.

There's a scene in "Planes, Trains, and Automobiles" when John Candy suggests to Steve Martin that they could "laugh about it now" as the two of them watch their rental car burning on the freeway. After we landed, a member of our crew said the same thing, but

Photo by Sgt. Brook R. Kelsey
Photo modification by Yvonne Dawson

no one was laughing. We were shaking our heads, wondering how we had gotten ourselves into this situation.

For the previous four days, we had been the perfect example of anti-group-think. We unanimously had decided to play it safe. Everybody had been willing to play devil's advocate to the point where we thought we never were going to go anywhere. We'd spent four days making the safe choice: avoiding bad weather on day one, not accepting a so-so mechanical problem on day two, getting sufficient rest and completing a thorough FCF on day three, and diverting earlier on day four.

After four days, we were all a little frustrated and at the first sign of good news, we pushed our way out to the coast into a dangerous situation. We were on the coast of Oregon an hour before sunset in December with just enough fuel and no communications with ATC. If the weather over land had not been as "good" as it was, a lot more could have gone wrong, and our CO would not have been getting a safe-on-deck call from no-man's land, Oregon. Instead, that friendly Coast Guard pilot may have been telling him the unhappy details of his rescue attempt that failed.

Lt. Hellmann is an instructor at HC-3.

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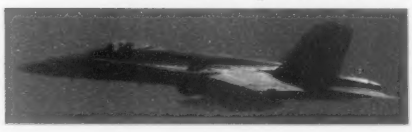
courses of action: blowing the gear down and landing on Highway 395, or doing a gear-up landing on the dry salt beds of Owens Lake. I quickly discounted any amazing display of superhuman airmanship and returned to the problem at hand. I had tried a few APU restarts, looking for a way to crank the engines if they continued to rollback. But the APU restart envelope is marginal under the best of conditions, and that didn't work. The ground was getting closer and closer, the cars on the highway were getting bigger and bigger, and that irritating laughter in my head grew louder and louder.

I reached Owens Valley and was starting to turn into the wind for what I thought would be the start of my ejection sequence when the left engine finally came to life, quickly followed by the right. The flight data recorded by the aircraft showed an altitude of 1,216 feet AGL and airspeed of 296 knots. All told, I had lost over 13,000 feet. Regaining some composure and turning for home, I informed the controller, in the calmest voice I could muster at the time, that I had a "few issues" I needed to take care of and was returning to base.

The RTB was uneventful. I had regained enough equipment to guide me home and it was a clear day, which made the navigation easy. End of story? Certainly not. When it rains it pours. Just for entertainment, I had two unsafe main mounts when I arrived. With that problem solved, 40 minutes after taking off, I was back on deck, kissing the good earth, very glad to be out of aircraft 403 and still in one piece.

Interpretation of the post-flight data (with the help of Boeing and NADEP engineers) revealed the left, primary, engine-feed valve had failed to reopen after being closed via the fire light. Once the right-engine fire light was closed and the cross-feed valve shut, the left engine was starved of fuel and shut down. Maintainers replaced the left-engine feed valve and the aircraft returned to an up status.



I came away with a renewed respect for the voices I hear in my head. Those voices are in our heads because of our own experiences, from listening to stories from our peers, or from reading *Approach* articles, and they are there for a reason. They are trying to keep us alive.

Operational Risk Management—assessing the threats, their likelihood of taking place, and severity of consequences if they do—works, if you use it. The fact that I had applied ORM techniques in my "what if this happens" approach to the rollback was commendable. The fact that I didn't follow them was almost criminal. When conducting check flights, it's easy to convince yourself to go flying in an aircraft that may not be fully mission capable. The Hornet allows for some quick fixes on flight-control surfaces or electronic problems, but that doesn't mean the whole problem is fixed. If minor problems resurface, especially when operating from the beach, it is easy to return to base or even complete the check flight. With an engine, however, the answer should be clear. You have little room for error, and karma isn't going to get the job done.

"Operational necessity" is a term we throw around far too loosely. It means the mission you've just been handed is more important than the lives of the pilots or the safety of their aircraft. We don't get a whole lot of operational-necessity missions a week before RIMPAC. It is one thing to recognize this fact, but another to put that mindset into action.

The decision to eject is harder than you might think. It wasn't that I felt this couldn't be happening to me, but that I didn't want to let anyone down, not my fellow aviators nor the maintenance department.

Now, having flown the FA-18 as a powered aircraft and as a glider, I can tell you there is no comparison as to which model is more enjoyable. I hope that one more horror story, one more experience shared, one more "there I was" tale of woe, will turn up the volume the next time the voices talk to you and to me.

LCdr. Pritchard flies with VFA-25.

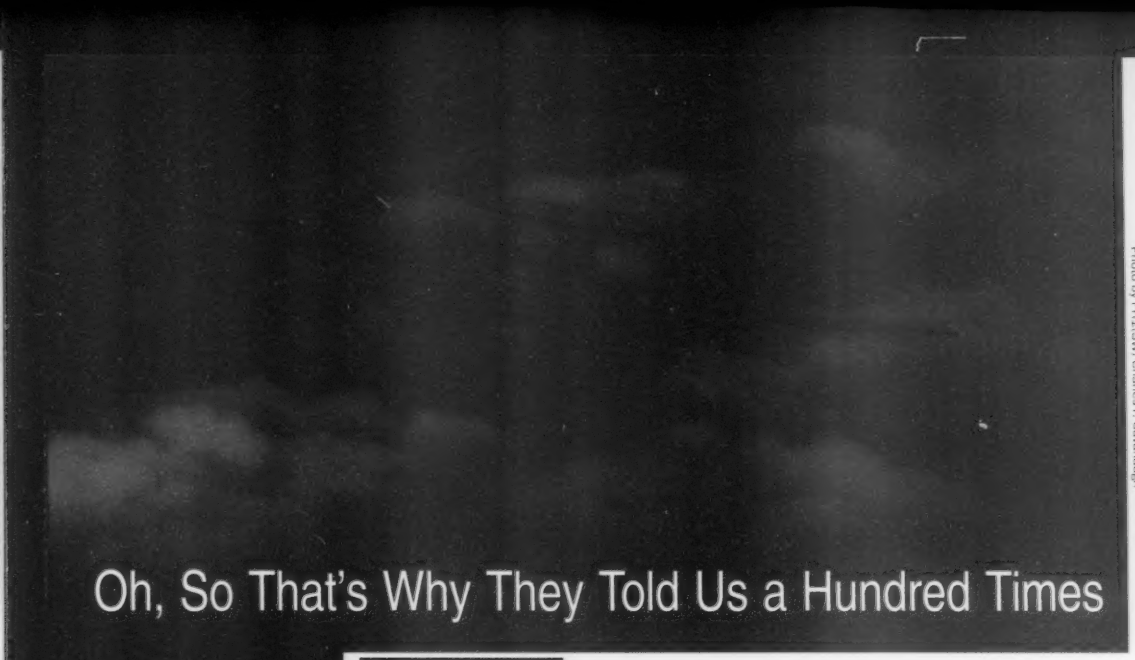


Photo by PH1(SW) Charles P. Cavanaugh

Oh, So That's Why They Told Us a Hundred Times

by Ltjg. John Joseph

We had no hope of getting out of the clouds without descending too low for our mission.

One night, we were tasked with a triple-cycle, airborne early warning mission—lots of time to spend on station with no tasking. Just as we launched, UHF 1 failed. No problem, it had been written up and fixed before, and we had five UHF radios left. We tried our "airborne" call on UHF 3 while we flew the departure. No luck.

Then our TACAN failed, so now we really needed a call to departure. A third radio finally allowed us to call out and request a climb on course. A minute later we were in the clouds, climbing to station, discussing how we were going to get back UHF 1 or 3, since they are the only two radios available on emergency generator.

With our attention fixed on this problem, we failed to notice the temperature steadily falling below freezing. Once we reached station, we took profile, and the pilot got out of his seat to check some circuit-breakers on the failed radios. As he climbed back into his seat, the copilot's airspeed indicator began to rapidly decrease (its pitot tube had frozen). Lots of ice had accumulated on the windshield, so we decided to turn on our engine anti-icing system. We called the ship to get help from the ATs in troubleshooting our radio problems. They suggested we swap a few boxes, so we set to work and eventually fixed our radios.

Five minutes later, both the back- and front-end crews reported hearing what sounded like something bouncing around in the forward equipment compartment. While we were worrying about the radios, ice had been building on the props. Now, chunks of ice were smashing into the fuselage. Vibrations began to pick up. Long after we should have, we turned on the prop de-icing system. We gave the system a few minutes to work, but nothing happened.

A quick check of the amperage on the prop de-ice panel revealed it was not working. As vibrations increased, we descended to warmer temperatures. We had no hope of getting out of the clouds without descending too low for our mission. Eventually, the ice dissipated, as did the vibrations.

On recovery, we still didn't have a TACAN. Marshall eventually vectored us in for a recovery, then switched us to approach, where we were told to fly bullseye. Well, we had no bullseye, which was par for the course. We flew a CCA until we locked up needles at one mile and made an uneventful trap.

Our icing problem had escalated farther than it ever should have. Had we prioritized our problems, we would have put the radio troubleshooting aside and focused on the potentially dangerous icing conditions. From day one, we're told to aviate, navigate, *then* communicate. It is easy to forget this mantra when the mission is routine or when problems arise.

Ltjg. Joseph flies with VAW-115, forward deployed in Japan.

A good landing is one from which you can walk away.

A great landing is one after which they can use the plane again.

Navy photo by LCdr. Steven Froncillo
Photo rendered

www.safetycenter.navy.mil